## REMARKS

Initially, in the Decision on Petition dated April 28, 2005, the Examiner asserts that the Petition does not contain a detailed description of the references to the extent required by 37 C.F.R. §1.111(b) and (c).

The present invention as recited in the claims filed are not taught or suggested by any of the above noted references whether taken individually or in combination with each other or in combination with any of the other references now of record.

The present invention as recited in the claims is directed, at a minimum, to writing data to a recording medium that includes writing in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors, and validation by reading out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information.

It is submitted that the cited references, whether considered alone or in combination, fail to disclose or suggest the invention as claimed. In particular, the cited references, at a minimum, fail to disclose or suggest writing in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a

location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors, and/or validation means which reads out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information.

All of the independent claims recite at least one of these features. In particular, independent claim 1 recites writing in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors. Independent claim 4 recites writing in each sector of a series of sectors of a recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors. Independent claim 6 recites a communication control unit writes in data to be written in each sector of a series of sectors of the recording medium in which data is to be written caused by the data write request location information which is information indicating a location of the sector in the series of sectors and common information

which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors.

Independent claim 7 recites an I/O control unit adds to data to be written in each sector of a series of sectors of the recording medium in which data is to be written caused by the data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors. Independent claim 8 recites a communication control unit writes in data to be written in each sector of a series of sectors of the recording medium in which data is to be written caused by the data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors. Independent claim 9 recites a communication control unit writes in data to be written in each sector of a series of sectors of the recording medium in which data is to be written caused by the data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors.

Independent claim 10 recites means for writing in data to be written in each sector of a series of sectors of the recording medium in which data is to be written caused by a data write request location information which is information indicating a

location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors when it receives the data write request from the external device. Independent claim 11 recites when writing data to the disk drive according to the read modify write method, the disk array unit writes in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors. Independent claim 12 recites write means for writing in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors. Independent claim 13 recites validation means which reads out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information. Independent claim 14 recites validation means which reads out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information.

The references considered most closely related to the claimed invention are briefly discussed below:

**U.S. Patent No. 5,557,767 (Sukegawa)** discloses in accordance with a write request from a host system in a direction of incrementing an address, a controller generates the same writing code and writes the writing code with ID information of each sector in a hard disk drive unit. Even when a series of related data are written on a plurality of sectors having non-sequential addresses, the same writing code is written in the ID information of each sector as far as the values of the sector addresses to be written change in the direction of incrementing the address. When the sector data is read ahead and registered in a read ahead cache in accordance with a data read request from the host system, a series of related sector data are registered in the read ahead cache on the basis of the writing code. However, Sukegawa does not disclose, at a minimum, writing in each sector of a series of sectors location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors, and/or validation means which reads out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information.

**U.S. Patent No. 5,719,885 (Ofer et al.)** discloses a method and apparatus for improving the data storage reliability of a host computer writing to a disk storage device receives a plurality of blocks of data from the host computer and writes the

blocks of data, according to a selected format, in a high speed cache memory. The data blocks in cache memory are then written to the disk drive, the blocks having a defined size. A plurality of the blocks form a sector on the disk drive and a plurality of the sectors form a track on the disk drive. Writing to the disk includes, transparently to the host, the calculation and attachment to each block of an error correcting code value. When data is written to the data cache, there is generated and associated with each of a group of the blocks of data, from the host computer, a second error code. The second error code is stored at a physical location in the cache memory, and when written to disk, is further written at a location which is not in the same sector as any of the blocks with which the second codes are associated. In this way, the host to cache level communications acquires a higher degree of reliability than previously available for full block transfer under, for example, the UNIX operating system. However, Ofer et al. does not disclose, at a minimum, writing in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors, and/or validation means which reads out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information.

**U.S. Patent No. 6,629,199 (Vishlitzky et al.)** discloses a digital data storage system in the form of a mass storage subsystem in which information is stored on one or more disk storage units, with a storage element constituting a track on a disk storage device and each track storing a plurality of records. Each track in each disk storage device of the digital data storage system is associated with a descriptor. When the control device retrieves the contents of a record, it can process the contents to generate a check value and compare the generated check value with the check value for the record as stored in the descriptor associated with the track. If they compare appropriately, the control device can determine that the record that was retrieved was, in fact, the record that was to be retrieved. On the other hand, if they do not compare appropriately, the control device can determine that the record that was retrieved was not the proper record. If the contents of the record are updated, the control device can update the check value in the descriptor to reflect the update of the record. However, Vishlitzky et al. does not disclose, at a minimum, writing in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors, and/or validation means which reads out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information.

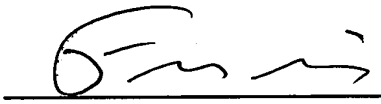
**Japanese Patent No. 8-212711 (Kojima)** discloses to facilitate the data control by dividing data into the data packets having a constant length, and adding the intrinsic identification codes corresponding to the divided orders to the specified position of each divided data packet. Original information data are divided into (n) pieces of information data, which are the data packets having a constant length. Intrinsic row identification codes 0 to (n-1) corresponding to the divided orders are added to the specified positions, e.g. the head, of respective information data. The row identification code is constituted in the ascending order or descending order of the row identification codes, e.g. binary codes. Thus, the first error correcting code po of each data packet is formed, and the first code series formed by adding each data packet is formed. Then, the second error correcting code pi in each series after interleaving is formed and added to each series, and the second code series is formed. The recording sector packets such as these continuously connect the rows and are recorded in a disk or transmitted. However, Kojima does not disclose, at a minimum, writing in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors, and/or validation means which reads out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information.

Therefore, since the references fail to disclose writing in each sector of a series of sectors of the recording medium in which data is to be written caused by a single data write request location information which is information indicating a location of the sector in the series of sectors and common information which varies every time data writing to the series of sectors occurs and is information set relating to the series of sectors, and/or validation means which reads out the location information and the common information written in each continuous sector of the recording medium and validates data based on the read out location information and common information, it is submitted that all of the claims are patentable over the cited references.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 500.43088X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.



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